CONCEPTUAL MODEL OF SECOND LEVEL TRANSPORT

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Анотація. Сучасний рівень розвитку громадськості характеризується високим рівнем урбанізації У статті наведені проблеми, викликані міським транспортом. Рішення даних проблем є застосування електричного транспорту «другого рівня». У статті розглядаються переваги електричного транспорту «другого рівня».

Ключові слова: урбанізація, міський електричний транспорт, трамвай, тролейбус, автобус, транспорт «другого рівня».

Abstract The modern level of society development has high level of urbanization. In the article it is described the problems caused by urban transport. The solution to these problems is using "second level" electric transport. In the article it is considered the advantages of second level" electric transport.

Keywords: urbanization, urban electric transport, tram, trolleybus, bus, transport "second level".

The modern level of society development has high level of urbanization, which imposes strict requirements for transport infrastructure. At the same time, the current condition of public electric transport which is used in cities in terms of energy consumption for reliability and comfort, inferior developed European countries. Over 80% of trams and trolleybuses has fully used their exploitation resource and are already out of use. About half of the rolling stock needs major repair.

Modern public transport is the source of soil vibrations that has harmful effect only on people but also on buildings and constructions.

Buses and trolleybuses are the main cause of asphalt pavement of city streets, rutting and asphalt sag in the area of public transport. This requires frequent repair works causing the environmental problems. Tramways decreases the equality of city streets, weakens the pavement. The area of the sleepers' roadbed is usually made with detachable concrete slabs that causes to noise when vehicle is moving on it.

One of the possible solutions of this problem is using of "second level" electric vehicles. That is why in more and more cities around the world "second level" transport system is widely used: magnetic suspension trains, cable cars and others.

The real cost of travelling by "second level" public transport will be lower the cost of travelling by the existing urban passenger transport by 3-5 times because of its following advantages:

1) Long-termed using of rails - track string structure (100 years) and its relatively low cost;

2) Due to the high carrying capacity. One hanging tram replaces 2 - 3 buses because its relative cost will be low;

3) Compact of passenger stations, parking sides due to the small size of the suspended trams and their small amount necessity, no-existence of pedestrian crossings, intersections, overpasses, multilevel solution reduces the cost of transport infrastructure, depreciation and operating costs on it;

4) Lack of land occupied by the transport system will free land for urban development that will bring no additional cost, and vice versa - additional revenue;

5) High environmental friendliness of the vehicle compared to any other city transport.

"Second level" transport gives an opportunity to build roads with large span. It has a high speed, relatively inexpensive highly profitable system with low-cost using and low-cost travel.

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ANALYSIS OF VARIOUS CONSTRUCTIVE FACTORS INFLUENCING THE STRENGTH OF GLUED STEEL-CONCRETE JOINTS WITHOUT ANCHORS

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In the process of building, exploitation, reconstruction of industrial enterprises a need arises to carry out installation works and equipment mounting on constructed and existing foundations, production lines and other auxiliary devices. Therefore, it is important to use rational fixing methods for various technological equipment on the foundations, concrete or reinforced concrete structures. In addition to traditional methods of equipment, fastening a joint without anchors can be successfully used. Mounting by this method is carried out by gluing clamping units or equipment basic parts on concrete surface (Picture 1). It is possible to use any adhesives, etc., that have sufficient adhesion on concrete and steel as well as high physical and mechanical properties.

A large number of scientific works are dedicated to studying and development of constructions using equipment mounting by a joint without anchors. Such leading Ukrainian scientists as Prof. Zolotov M.S., Prof. Shutenko L.M., Prof. Skrypnik M.O. and others have been engaged into fundamental researches and development of high-